

AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. § 1.121 the following listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (currently amended): A clamp mechanism of a throwaway tip for pressing a throwaway tip, the clamp mechanism comprising:

a tool body having a tip body;

~~in which a fitting hole is formed through a~~ the tip body;

a tip fitting seat formed in the tool body;

a contact portion of the tip body formed in an opening of the fitting hole; and

a clamp member comprising:

a shaft portion inserted into the fitting hole; by the use of

a head portion of a clamp member having a shaft portion inserted into which passes through the fitting hole, the head portion having an outer diameter equal to or greater than that of the shaft portion and clamping the throwaway tip to the tip fitting seat by allowing the clamp member to advance toward the tip fitting seat in a central axis direction of the shaft portion; and

a section of a back surface of the head portion, the section being perpendicular to the central axis direction and having a circle shape centered at the central axis line;

~~and the head portion with an outer diameter larger than that of the shaft portion and thus clamping the throwaway tip to a tip fitting seat by allowing the clamp member to advance toward the tip fitting seat of a tool body in the central axis direction of the shaft portion,~~

~~wherein in the clamp member, a section, which is perpendicular to the central axis direction, of the back surface of the head portion has a circle shape centered at the central axis line, and~~

wherein in the tip body of the throwaway tip, the head portion of the clamp member can pass through the fitting hole, and a contact portion wherein with which a part of the back surface of the head portion comes ~~in~~ into contact with the contact portion formed in an opening of the fitting hole when the clamp member is allowed to advance ~~is formed in an opening of the fitting hole.~~

Claim 2 (currently amended): The clamp mechanism according to Claim 1, wherein the contact portion of the tip body has a crescent shape which is convex from the inner circumference of the fitting hole toward the outer circumference as seen in the direction along the ~~a~~ center line of the fitting hole.

Claim 3 (currently amended): The clamp mechanism according to Claim 1 ~~or 2~~, wherein the central axis line of the clamp member is tilted with respect to ~~the~~ a center line of the fitting hole.

Claim 4 (currently amended): The clamp mechanism according to Claim 3, further
comprising:

wherein a first portion, which is of the contact portion, the first portion being located in a plane including the central axis line of the clamp member and the center line of the fitting hole, of the contact portion is and is more convex in the direction along the central axis line than other portions.

Claim 5 (currently amended): The clamp mechanism according to Claim 3 ~~or 4~~, further comprising:

wherein a plurality of the fitting holes formed in the tip body, each of the plurality of fitting
holes having the respective center lines parallel to each other is formed in the tip body;

a plurality of the clamp members provided in the tool body, each of the plurality of clamp members corresponding to the a respective fitting holes; is provided in the tool body, and
the central axis lines of each of the plurality of clamp members having a respective central axis line which extend extends in a parallel direction or in a direction intersecting each other at an intersection angle of 5° or less as seen in the direction along the center lines.

Claim 6 (currently amended): The clamp mechanism according to ~~any one of Claims~~Claim
3, further comprising: 3 to 5, wherein

a plurality of the fitting holes formed in the tip body, each of the plurality of fitting holes
having ~~the~~ a respective center lines line parallel to each-other is formed in the tip body,

a plurality of the clamp members provided in the tool body, each of the plurality of clamp members corresponding to the a respective fitting holes hole ~~is provided in the tool body~~,

a mark provided in the tip body to indicating indicate an order of in which allowing the clamp members to advance toward the tip fitting seat ~~is provided in the tip body.~~

Claim 7 (currently amended): The clamp mechanism according to ~~any one of Claims 1 to 6,~~
~~wherein~~ Claim 1, further comprising:

a screw portion provided at an end of the shaft portion opposite to the head portion in the clamp member, the screw portion being inserted into the tool body, ~~is provided at the end of the shaft portion opposite to the head portion in the clamp member, and~~

wherein the clamp member is allowed to advance toward the tip fitting seat while rotating around the central axis line over the whole circumference.

Claim 10 (new): A clamp mechanism of a throwaway tip for pressing a throwaway tip, the clamp mechanism comprising:

- a plurality of fitting holes formed in a tip body of a tool holder, each of the plurality of fitting holes having respective center lines parallel to each other;

- a plurality of contact portions of the tip body formed in an opening of the fitting hole; and

- a plurality of clamp members provided in the tool body, each of the plurality of clamp members corresponding to a respective fitting hole, and each of the plurality of clamp members comprising:

- a shaft portion inserted into the fitting hole;

- a head portion which passes through the fitting hole, the head portion having an outer diameter equal to or greater than that of the shaft portion and clamping the throwaway tip to the tip fitting seat by allowing the clamp member to advance toward the tip fitting seat in a central axis direction of the shaft portion; and

- a section of a back surface of the head portion, the section being perpendicular to the central axis direction and having a circle shape centered at the central axis line;

- wherein a part of the back surface of a respective head portion comes into contact with the respective contact portion formed in an opening of the fitting hole when the respective clamp member is allowed to advance.